Biochemistry of Myasthenia Gravis and Muscular Dystrophy

Edited by G. G. Lunt and R. M. Marchbanks
Academic Press; London, New York, San Francisco, 1978
xvi + 374 pages. £12.50

This book is an excellent compilation of papers presented by invitation at a workshop held by the Neurochemical Group of the Biochemical Society at the University of Bath in 1977. Its publication is timely in view of the great interest in these disorders, with the first evidence of an autoimmune basis. So great is recent emphasis, that it has been observed that there are more people investigating than suffering myasthenia gravis. However, if so, this is justified because of the underlying scientific principles which may be involved in other neurological disorders and also as an example of the value of research (on the nicotinic cholinergic receptor) which began as a non-clinically oriented investigation and subsequently turned out to be of significant clinical interest. In our current atmosphere of the emphasis on 'relevance' and on 'contract research', this is worth noting.

The papers embrace the whole spectrum of approaches, from clinical descriptions through the anatomy, biochemistry, physiology, pharmacology and immunology related to the receptor and its circulating antibodies, and the development of valid animal models, to current concepts and appraisals of therapeutic methods.

The high quality of the resultant publication is due partly to the careful choice, by the organisers, of participants who are all acknowledged experts, and to rigorous editing. The book is attractively produced, well illustrated and, sometimes missing from edited symposia publications, has an adequate index.

I would recommend this book to all clinicians and neuroscientists interested in receptor interactions and neurological disorders.

H. S. Bachelard

Cellular and Biochemical Aspects in Diabetic Retinopathy

Edited by F. Regnault and J. Duhault
Elsevier/North-Holland; Amsterdam, New York 1978
viii + 308 pages. Dfl 92.00, $45.00.

This book is a record of the proceedings of the 7th INSERM Conference held in Paris in 1978 which was devoted entirely to the pathology of diabetic retinopathy – now one of the commonest causes of blindness in developing countries.

The book is divided into four sections. In the first of these some of the fundamental aspects of the pathological changes taking place in endothelial cells are discussed. There follows a section on platelet pathology and coagulation mechanisms with special emphasis on their possible derangement in diabetes. The third section, which is most likely to interest biochemists, deals with changes that may take place in basement membranes and connective tissue in diabetes. It raises the question of possible abnormalities in collagen and glycoprotein synthesis in diabetes. The final section deals with the alterations in growth hormone secretion in relation to diabetes which some

have felt might underlie retinopathy.

It is true to say that, as with many conferences of this kind, no very clear picture of the nature of the fundamental changes taking place in retinopathy really emerges. However, in the closing section of the book a really admirable summary by I. C. Michaelson puts the field well into perspective for the non-specialist. This Conference, too, seems to have had its lighter moments. I particularly liked the poem on thrombocytes on p. 99 attributed to Professor G. V. R. Born's sister.

Is this book a 'must' for every biochemist? Not quite, but at the very least it is strongly recommended reading for anyone seriously interested in the biochemical genesis of diabetic complications.

K. W. Taylor

Blood Drugs and other Analytical Challenges

Methodological Surveys in Biochemistry, Volume 7

Edited by E. Reid
Ellis Horwood; Chichester, 1978
356 pages. £19.50

This is a companion volume to *Assay of Drugs and other Trace Compounds in Biological Fluids* which was published in 1976. Each of these books is the outcome of a Bioanalytical Forum convened by Dr Eric Reid at the University of Surrey, designed to distil the wisdom and experience of analysts who have specialized in particular drugs or techniques. Dr Reid's laudable aim has been to stimulate clear thinking and informative writing about methodological rationale, as distinct from analytical recipes – methodology in the true sense, rather than cookery.

The 'other analytical challenges' of the title can be taken to refer to a variety of trace substances in biological fluids, notably endogeneous steroids and dioxin, which are considered in a few chapters.

Thirteen short analytical case histories are presented, mostly by research staff of well known drug houses. These histories chiefly deal with the assay of particular drugs in blood (plasma/serum) or urine, some well known, but others too new to have found their way into the Pharmacopoeia. Pharmaceutical companies' willingness to present these kinds of data to a critical audience and readership can only be commended. Happily gone are the days when a new drug could be marketed with little or no quantitative information on its absorption, biotransformation and excretion.

In point of fact, the analytical case histories comprise quite a small part of the book. Most of it is devoted to broad considerations of particular techniques, in four sections dealing respectively with: The Framework, Subtle Gas Chromatography, Mass-Spectrometric Approaches and HPLC, TLC and Non-Chromatographic Approaches.

The Framework is the most readable of these sections, and deals with the strategy and objectives of method development, some applications of statistics and quality control, and recommended terminology and practices in chromatographic assays. The approach here is generally stimulating and informative.

Subtle Gas Chromatography deals with the scope and limitations of wall-coated and support-coated open tubular columns, and with some applications of selective detectors. Helpful advice is proferred on the pros and cons of derivatization, especially when precise quantitation is important.

Mass-Spectrometric Approaches reflects current interest in biomedical mass spectrometry in the conventional mode, or using negative ion, chemical ionization, field ionization and field desorption techni-